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ABSTRACT

To discover factors which contribute to a high response rate for questionnaire surveys, the preferences of 150 college teachers and teaching assistants were studied. Four different questionnaire formats using 34 common items were sent to the subjects: open-ended; Likert-type (five points, from "strong influence to return," to "strong influence not to return"); checklist; and rank ordering of five to eight factors. Subjects were also asked how many questionnaires they had received, and returned, in the past year. When instructed to choose one of the four questionnaire formats and complete it, 54 subjects (36%) completed and returned a questionnaire; 22 chose the checklist, 17 the Likert-type, 14 the open-ended, and 1 the ranking. Characteristics of each type of questionnaire which influence rate of return--such as physical characteristics, content, and administration methods--were analyzed from the answers received. Subjects preferred clarity and brevity; familiar but not overly personel subject matter; and convenient methods of completion and return. A humorous followup reminder, if any, was preferred. Respondents also wished to know the purpose of the research and the researchers, and to be assured of confidentiality. Non-response was predicted for questionnaires which did not meet these criteria. (GDC)

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A Study of Factors that Influence Response Rate Using a Questionnaire on Questionnaires

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A Study of Factors That Influence Response Rate Using a Questionnaire on Questionnaires

INTRODUCTION

The use of questionnaires as a research technique has been prevalent in social and behavioral sciences because of their low cost, ease of administration, large sampling, and ease of completion. Yet the questionnaire has limitations such as low response rate, limited reliability and validity information, and impersonalization. Among these limitations, response rate seems to be a perennial problem for questionnaire users.

While seemingly lacking an underlying theory which would assure a high degree of response rate from questionnaire recipients, questionnaire users often have to rely on "gimmicks" to attract their recipients to respond to their questionnaires. Many questionnaire advocates have painstakingly tried to find tactics that might boost response rates in questionnaire surveys. Factors such as impressive questionnaire features, endorsement or sponsorship of an influential organization, assurance of anonymity and confidentiality, promises of taken rewards, clever follow-up methods, etc., have recurred as research topics. However, a common weakness in these tactic-research studies is that only a limited number of factors can be studied simultaneously. Information concerning some factors is scant while for others abundant. In order to avoid piecemeal searching for information concerning the factors for boosting response rates, the purpose of the present study was to investigate the most

desirable factors, based on preferences of questionnaire users, and to provide more detailed information for future questionnaire users.

Factors which might affect the response rate of a questionnaire survey were categorized into three groups of common characteristics: (1) physical features, (2) content, and (3) administration methods. The research questions concerning these three main factors were as follows:

(1) What physical features of a questionnaire would influence recipients to respond to a questionnaire?

(2) What kind of questionnaire content would recipients prefer or hesitate to answer?

(3) What methods of administration would induce recipients to respond to a questionnaire?

An additional research question concerned format preference: Which of four questionnaire formats (checklist, open-ended, Likert type, or item ranking) do recipients prefer to answer?

LITERATURE

A survey of literature was conducted to obtain a list of the most commonly used and effective methods of increasing response rate. There were two discouraging aspects to this search. First, it appeared that the primary purpose of the survey reported in the literature was not the analysis of the survey method, but to answer some substantive question. The article on the survey was secondary, and in some cases a by-product of the original purpose. Second, techniques that significantly increase response rate in one survey failed to work in other surveys. A summary of some of the possible factors increasing response rate is presented in Table 1.

Table 1

A Survey of Factors and Their Effects

on Questionnaire Response Rates

This Technique	Will Increase the Response Rate	Will Not Necessarily Increase the Response
Using colored printed stock		Horowitz & Sedlacek, 1974; Linsky, 1975
Enclosing a stamped return envelope	Erdos, 1957a; Veiga, 1974; Linsky, 1975	
A personal, signed cover letter	Erdos, 1957a; Matteson, 1974 Linsky, 1975	Horowitz & Sedlacek, 1974
A researcher of status and prestigious sponsorship	Erdos, 1957a; Linsky & Spendlove, 1967; Carlsmith, et al, 1973	Horowitz & Sedlacek, 1974
Use of follow-ups	Dillman, et al, 1974; Gleason & Huck, 1974; Anderson & Berdie, 1975; Sketh, 1975	
Mailing directly to the respondent	Rockman, 1973	
Promise of confidentiality or anonymity	Erdos, 1957a	Linsky & Spendlove, 1967; Fuller, 1974
Including or promising to send a premium or monetary incentive	Erdos, 1957b; Rockman, 1973; Carlsmith, et al, 1973; Gleason & Huck, 1974; Linsky, 1975	
Short questionnaires	Erdos, 1957a; Dillman, 1974	
Pre-coded (as opposed to open-ended) questions	Falthzik & Carroll, 1971	Linsky, 1975

METHODOLOGY

With respect to the questions under investigation, the following design and administration was implemented in this study.

Sampling

The population of the study was all teaching members of the staff of Southern Illinois University in the College of Education and Liberal Arts and Sciences in the fall of 1975, including all full-time or part-time teaching faculty or teaching assistants. From this population, 150 subjects were selected randomly from eight randomly selected departments, 75 from each college.

Questionnaire Format

In order to find the format preferred by the sample, four different question formats were chosen for comparison: open-ended, Likert-type, checklist, and rank order. Items within each format were constructed to elicit the degree to which the various questionnaire characteristics (physical features, content, and administration) would influence return or non-return of a questionnaire. The Likert scale provided five response points from "strong influence to return" to "a strong influence NOT to return." On the rank order format, the subjects were asked to rank from five to eight factors with regard to their influence on return of a questionnaire. The overall content of the four question formats were as similar as possible, with 34 items in common serving as the basis for the analysis of the research questions one through three. In addition, two questions were included on each form to ask the subjects how many questionnaires they had received during the past twelve months, and of these, how many they had returned.

Procedure

Each subject received a packet of the four question formats and was asked to choose only one to complete and return. The forms were all on the same sized paper and were inserted into the envelope in random order. Two weeks were allowed for returning the completed questionnaire.

RESULTS AND DISCUSSION

The response rates by questionnaire are presented in Table 2.

Table 2

Response Rates by Questionnaire Type

Type of Questionnaire Returned	Number Returned	Percent of 150	Percent of No. Returned
Checklist	22	14.7	40.7
Likert-type	17	11.3	31.5
Open-ended	14	9.3	25.9
Ranking	1	0.7	1.9
OVERALL	54	36.0	100.0

The 36% response rate is discouraging (to say the least), but since there was no follow-up used, and the questionnaires were sent out just before Thanksgiving break, the researchers were not too surprised, in retrospect. Performing a chi-square goodness of fit on the four types of questionnaires returned was highly significant ($\chi^2 = 17.9$, $df = 3$, $p < .001$). If the questionnaire type using ranking were eliminated, there was no significant preference of questionnaire type using the Chi-square goodness of fit test. (It was decided to eliminate the one

ranking questionnaire from further analysis for lack of a basis of comparison.)

A discussion of the wording of the questions and the results will be presented for each questionnaire format separately. The complete results for each of the common items by format of questionnaire is presented in Appendix A.)

Checklist Format

After a general introduction of the purpose of the summary, the respondents were asked to "check as many items that you think are important and that would influence whether or not you would return a questionnaire." For example, with respect to the physical appearance characteristics, the question was asked, "Which of the following physical appearance techniques would influence you to return a questionnaire?"

The seven most important features of influencing return of questionnaires is given in Table 3.

Table 3

Features Influencing Questionnaire Return

(from Checklist Format)

Characteristic	N(out of 22)	Percent
Research purpose is explained	22	100
Simple, clear directions	21	96
Stamped, self-addressed return envelope	21	96
Less than 4 pages	21	96
Topic you have experience with	21	96
Neat overall appearance	18	82
Letter is addressed to you	18	82

Three of the features that were checked least often were (1) Promising a token reward for participation - 9%, (2) Answering over the phone - 5%, and (3) Using machine answer sheets - 0%.

The checklist format questionnaire included the following question that did not appear as directly on the other formats: "Which of these areas of information would you hesitate to answer on a questionnaire?" The results of this question, including all areas listed, is given in Table 4.

Table 4

Areas of Information Causing Hesitation to Respond

Areas of Information	Number Responding	Percent of Respondents (N=22)	Percent of Responses (N=41)
Age	0	0	0
Educational status	0	0	0
Occupation and position	0	0	0
Savings	14	64	34
Hobbies and interests	0	0	0
Opinions	0	0	0
Marital status	1	5	2
Name	2	9	5
Income	9	41	22
Number of children	0	0	0
Personal properties	10	45	24
Club memberships	5	23	12

Obviously, a researcher should expect little response to questions related to certain areas of information, even perhaps, if the areas are basic to the purpose of the research.

Likert-type Format

After a brief introduction, the questionnaire using Likert items asked, "To what extent would each of the following circumstances influence whether or not you would complete and return a questionnaire?" The respondents were asked to place an X in columns headed "Strong Influence to Return," "Some Influence to Return," "No Influence," "Some Influence Not to Return," and "Strong Influence Not to Return." Those characteristics that were most frequently chosen to have strong or some influence are presented in Table 5.

Table 5

Factors Influencing Questionnaire Return (from Likert Format)

Characteristics	N(out of 17)	Percent
Research purpose is explained	17	100
Sincere, informal tone of letter	17	100
Simple, clear directions	17	100
Stamped, self-addressed return envelope	17	100
Researcher personally known	17	100
Answer directly on questionnaire	16	94
Typewritten pages	14	82

Three of the characteristics that were least likely in influence returns were (1) Use of colored paper, 18%, (2) Use of taken reward, 35%, (3) Mailing questionnaire to respondent's home, 24%.

There were a few items unique to the Likert-format questionnaire. The items are presented in Table 6 with "Strong" and "Some" frequencies combined.

Table 6

Influences of Items Unique to Likert-format Questionnaire (N=17)

Characteristic	Influence TO Return	No Influence	Influence NOT TO Return
Physical appearance			
Cartoon is added on cover letter	1	10	6
Cover letter written in friendly manner	15	2	0
Cover letter closed with reproduced signature	1	11	5
Questions take at least 12 minutes	3	5	8
Content			
You are familiar with quest. topics	17	0	0
You oppose questionnaire topics	10	4	2
You are required to look up answers	1	4	12
Administration			
You are given the questionnaire in person while shopping	2	3	12

Open-ended Format

Since responses to open-ended items are dependent upon how the question is worded, the open-ended questions are given below.

In each of the general areas below, what specific factors, if any, do you think would influence you to complete a questionnaire and return it. Please don't feel restricted by the examples:

(1) The physical appearance (for example length, elegance, format).

(2) The content of the questions (for example, items which are too personal, too much trouble).

(3) Just who the researcher is (for example, his status, connections, affiliation, purposes).

(4) The method of administering the survey (for example, by what means you receive the questionnaire, how you are expected to return it, any incentive received or promised).

The responses were categorized into one of those on the Likert or checklist formats. The most frequently mentioned characteristics are given in Table 7 below.

Table 7

Factors Influencing Questionnaire Return (from Open Format)

Characteristics	N (out of 14)	Percent
Confidentiality	13	93
Less than 4 pages	10	71
Research purpose is explained	9	64
Simple, clear directions	8	57

When responses from all three types of questionnaires are combined, the most frequently cited factors influencing questionnaire returns are presented in Table 8.

Table 8

Characteristics of Questionnaires Most Frequently Cited as Influencing Return of Questionnaire Across All Three Formats

Characteristics	N	Percent (out of 53)
Physical appearance		
Less than 4 pages	44	83
Neat overall appearance	36	68
Introductory Letter		
Research purpose is explained	48	91
Clear, simple instructions	46	87
Confidentiality is promised	42	79
Research results returned	32	60
Topics covered you have experience with	32	60
Method of Administration		
Stamped, self-addressed return envelope	42	79
Mailed to office	28	53
Answer on questionnaire	33	62
Methods of Follow-up		
A humorous reminder	22	42
Enclose a second questionnaire	17	32
Characteristics of Researcher		
Personally known	31	58
Works with respected organization	24	45

In response to the question regarding the number of questionnaires received and returned during the past 12 months, the following distributions were generated.

Table 9

Questionnaires Received and Returned during Past 12 Months

Number of Questionnaires	Received		Returned	
	Frequency	Percent	Frequency	Percent
0 - 6	35	66 %	42	79 %
7 - 22	16	30	11	21
More than 22	2	4	0	0
MEAN	6.0		4.4	
MEDIAN	4.0		3.0	

CONCLUSIONS

The results indicate that a sample of presumably frequent questionnaire users, when placed in a position of respondent, favored a questionnaire having characteristics of clarity and brevity; having a familiar, yet not-too-personal subject matter; and being convenient to administer and return. The majority did not wish to be reminded; but if one must, use a humorous follow-up. They wanted to know the purposes of the research, to be promised confidentiality, to be informed of the results, and to know the researcher(s) who possibly had some status. The clear ways in insure non-response were to create questionnaires which were too long, too hard to fill out, too personal, had non-familiar subject

matter, and were delivered at home with no stamped, self-addressed return envelope. Other factors mentioned in this study as techniques frequently manipulated by researchers seemed not to possess the power to affect a return rate that many studies have indicated. The researchers were aware of the obvious limitations of a 36% return rate, and generalizability of the results. However, the finding of the present study suggested that certain techniques could be useful in boosting return rate and a questionnaire user should take them into consideration before conducting a questionnaire survey.

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Appendix A

CHARACTERISTICS INFLUENCING QUESTIONNAIRE RETURN BY TYPE OF QUESTIONNAIRE

Characteristic	Checklist (N=22)		Likert (N=17)		Open (N=14)		Combined (N=53)	
	N	%	N	%	N	%	N	%
PHYSICAL APPEARANCE								
Typewritten pages	13	59	14	82	0	0	27	51
Printed pages	7	32	13	77	1	13	21	40
Smaller or larger (than 8 1/2 x 11)	10	46	5	29	0	0	15	28
Machine answer sheet	0	0	8	47	0	0	8	16
colored paper	8	36	3	18	1	7	12	23
Less than 4 pages	21	96	13	77	10	71	44	83
Sponsoring organization on letterhead	12	55	14	82	0	0	26	49
Neat overall appearance	18	82	16	94	2	14	36	68
CHARACTERISTICS OF INTRODUCTION LETTER								
Research purpose is explained	22	100	17	100	9	64	48	91
Letter is addressed to you	18	82	6	35	1	7	25	47
Confidentiality is promised	14	64	15	88	13	93	42	79
Person to answer is specified	6	27	11	65	0	0	17	32
Sincere, informal tone of letter	11	50	17	100	0	0	28	53
Simple, clear directions	21	96	17	100	8	57	46	87
Token reward (eg coin) for particip.	2	9	6	35	0	0	8	15
Research results promised	15	68	14	82	3	21	32	60
Topic you have experience with	21	96	11	65	0	0	32	60
METHOD OF ADMINISTRATION								
Quest'aire delivered to you personally	8	36	*	*	0	0	8	22
Stamped, self-addressed return envelope	21	96	17	100	4	29	42	79
Delivered by boss	1	5	6	35	0	0	7	13
Picked up by researcher	4	18	3	18	0	0	7	13
Mailed to your home	3	14	4	24	0	0	7	13
Mailed to your office	16	73	11	65	1	7	28	53
Answer over phone	1	5	7	41	0	0	8	15
Answer on questionnaire	17	77	16	94	0	0	33	62
METHODS OF FOLLOWUP								
A second questionnaire	10	46	7	41	0	0	17	32
A telephone reminder	4	18	8	47	1	7	13	25
Small token gift with 2nd Q.	3	14	5	29	0	0	8	15
A humorous reminder	12	55	10	59	0	0	22	42
CHARACTERISTICS OF RESEARCHER								
Works with respected person/organiz'n	8	36	12	71	4	29	24	45
Located in your community	5	23	10	59	0	0	15	28
Located out of state	3	14	3	18	0	0	6	11
Personally known	14	64	17	100	0	0	31	58

* Item not on questionnaire